AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (previously amended) A microfastening system comprising:

a first fastening element including a plurality of extending nanotubes; and

a second fastening element including a plurality of extending nanotubes;

wherein the fastening elements comprise a substrate including an attachment surface and a plurality of functionalized non-linear nanotubes, the non-linear nanotubes of the first and second fastening elements each having a first end and a second end, the non-linear nanotubes of the first and second fastening elements each being attached at the first end to and extending from said attachment surface, wherein the second end is free of the surface.

2-23. (canceled)

24. (previously presented) A microfastening system comprising:

a first fastening element including a plurality of extending nanotubes; and

a second fastening element including a plurality of extending nanotubes, wherein said nanotubes of at least one of said fastening elements are selectively deformable;

whereby upon joining said first and second fastening elements, the extending nanotubes from each element become mechanically interconnected, wherein said fastening elements are reusable.

25. (currently amended) The microfastening system of Claim 24 wherein ~~said~~ at least one of said first and second fastening elements further ~~comprise~~ comprises a substrate from which said nanotubes of the respective elements extend.

26. (previously presented) The microfastening system of Claim 25 wherein said substrate is formed from materials selected from the group consisting of metals, carbon, silicon, germanium, polymers and composites thereof.

27. (currently amended) The microfastening system of Claim 24 wherein said nanotubes of the first and second elements are at least partially multi-walled.

28. (currently amended) The microfastening system of Claim 24 wherein at least one of said first and second fastening elements comprises ~~the~~ nanotubes ~~are~~ functionalized to a non-linear shape.

29. (currently amended) The microfastening system of Claim 28 wherein the non-linear nanotubes of said first and second fastening ~~element~~ elements ~~are selected from~~ comprise hooks, loops, or spirals ~~and combinations thereof~~.

30-34. (canceled)

35. (previously amended) A method of manufacturing a microfastener comprising the steps of:

a) providing a substrate having an attachment surface;

b) introducing a plurality of open ended selectively deformable non-linear nanotubes to said substrate, each nanotube with a means for fastening, whereby said nanotubes are attracted to said attachment surface and become affixed thereto, wherein said microfastener is reusable.

36. (previously presented) The method of Claim 35 wherein said nanotubes are functionalized prior to attaching to said substrate.

37-38. (canceled)

39. (previously presented) The method of Claim 35 wherein said substrate is formed from materials selected from the group consisting of metals, carbon, silicon, germanium, polymers and composites thereof.

40. (previously presented) The method of Claim 35 wherein said nanotubes are at least partially multi-walled.

41. (previously presented) The method of Claim 35 wherein the non-linear nanotubes of said microfastener are selected from hooks, loops, spirals and combinations thereof.

42. (previously presented) The method of Claim 35 wherein said nanotubes are attached to said substrate in the presence of an electric field.

43. (canceled)

44. (previously presented) A microfastening system comprising:

a first fastening element including a plurality of extending nanotubes; and

a second fastening element including a plurality of extending nanotubes, at least some of which comprise nanotubes selected from the group consisting of

a) hooks, and

b) spirals,

whereby upon joining said first and second fastening elements, the extending nanotubes from each element become mechanically interconnected.

45. (currently amended) The microfastening system of Claim 44 wherein ~~said~~ at least one of said first and second fastening elements further ~~comprise~~ comprises a substrate from which said nanotubes of the respective elements extend.

46. (previously presented) The microfastening system of Claim 45 wherein said substrate is formed from materials selected from the group consisting of metals, carbon, silicon, germanium, polymers and composites thereof.

47. (currently amended) The microfastening system of Claim 44 wherein said nanotubes of the first and second elements are at least partially multi-walled.

48. (currently amended) The microfastening system of Claim 44 wherein ~~the~~ at least one of said first and second fastening elements comprises nanotubes ~~are~~ functionalized to a non-linear shape.

49. (currently amended) The microfastening system of Claim 48 wherein the non-linear shape is ~~nanotubes of said first fastening element are~~ selected from hooks, loops, and spirals. ~~and combinations thereof.~~

50. (previously presented) The microfastening system of Claim 44 wherein said nanotubes of at least one of said fastening elements are selectively deformable.

51. (previously presented) The microfastening system of Claim 44 wherein said fastening elements are reusable.

52-56. (canceled)

57. (previously amended) A method of manufacturing a microfastener having nanotubes with two ends, comprising the steps of:

a) providing a substrate having an attachment surface;

b) introducing a plurality of open ended nanotubes to said substrate, each nanotube with a means for fastening, whereby said nanotubes are attracted to said attachment surface and become affixed thereto, wherein at least some of the nanotubes become affixed at only one end, wherein said microfastener is reusable.

58. (previously presented) The method of Claim 57 wherein said nanotubes are functionalized prior to attaching to said substrate.

59-60. (canceled)

61. (previously presented) The method of Claim 57 wherein said substrate is formed from materials selected from the group consisting of metals, carbon, silicon, germanium, polymers and composites thereof.

62. (previously presented) The method of Claim 57 wherein said nanotubes are at least partially multi-walled.

63. (currently amended) The method of Claim 57 wherein the ~~non-linear~~ nanotubes ~~of said fastening element~~ are selected from the group consisting of loops, hooks, and spirals~~, and combinations thereof.~~

64. (previously presented) The method of Claim 57 wherein at least some of said nanotubes are selectively deformable.

65. (previously presented) The method of Claim 57 wherein said nanotubes are attached to said substrate in the presence of an electric field.

66. – 69. (canceled)

70. (currently amended) A microfastening system according to claim 1, wherein the substrate of the first and second fastening elements comprises material selected from the group consisting of metal, carbon, silicon, germanium, polymers, and composites thereof.

71. (currently amended) A microfastening system according to claim 1, wherein the nanotubes of the first and second fastening elements are at least partially multi-walled.

72. (canceled)

73. (currently amended) A microfastening system according to claim 1, wherein the non-linear nanotubes of the first and second fastening elements comprise hooks or spirals.

74. – 84. (canceled)

85. (previously amended) A microfastening system comprising

a first fastening element comprising a plurality of extending nanotubes; and

a second fastening element comprising a plurality of extending nanotubes,

wherein extending nanotubes from each element are disposed so as to become mechanically interconnected as the first and second fastening elements are joined by advancing toward each other, and

wherein extending nanotubes on both fastening elements are disposed so as to remain permanently fixed to their respective fastening elements during the action of advancing the elements toward each other, wherein the extending nanotubes comprise hooks or spirals.

86. (currently amended) A microfastening system according to claim 85, wherein the first and second fastening ~~element~~ elements comprise a substrate from which the nanotubes of the respective elements extend, the substrate comprising a material selected from the group consisting of metal, carbon, silicon carbon, germanium, polymers, and composites thereof.

87. (currently amended) A microfastening system according to claim 85, wherein the nanotubes of the first and second fastening elements are at least partially multi-walled.

88. (canceled)